



Fig. 1

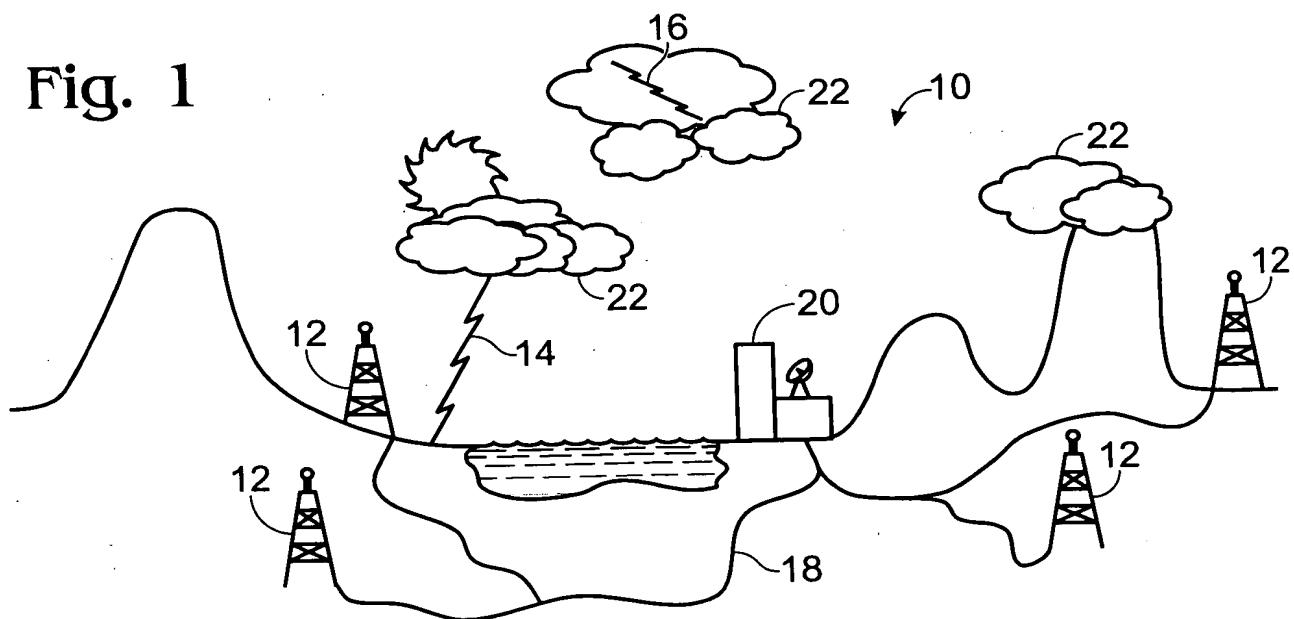


Fig. 2

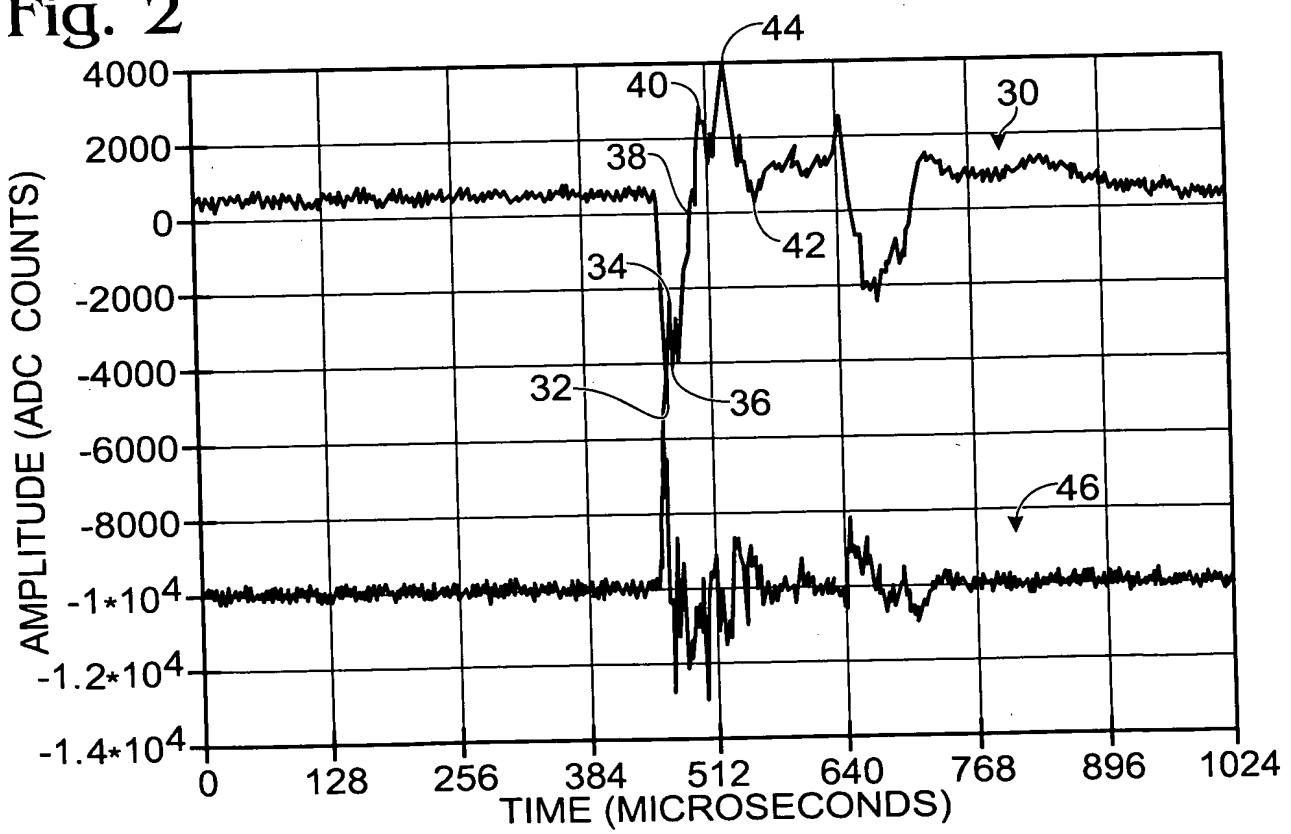




Fig. 3

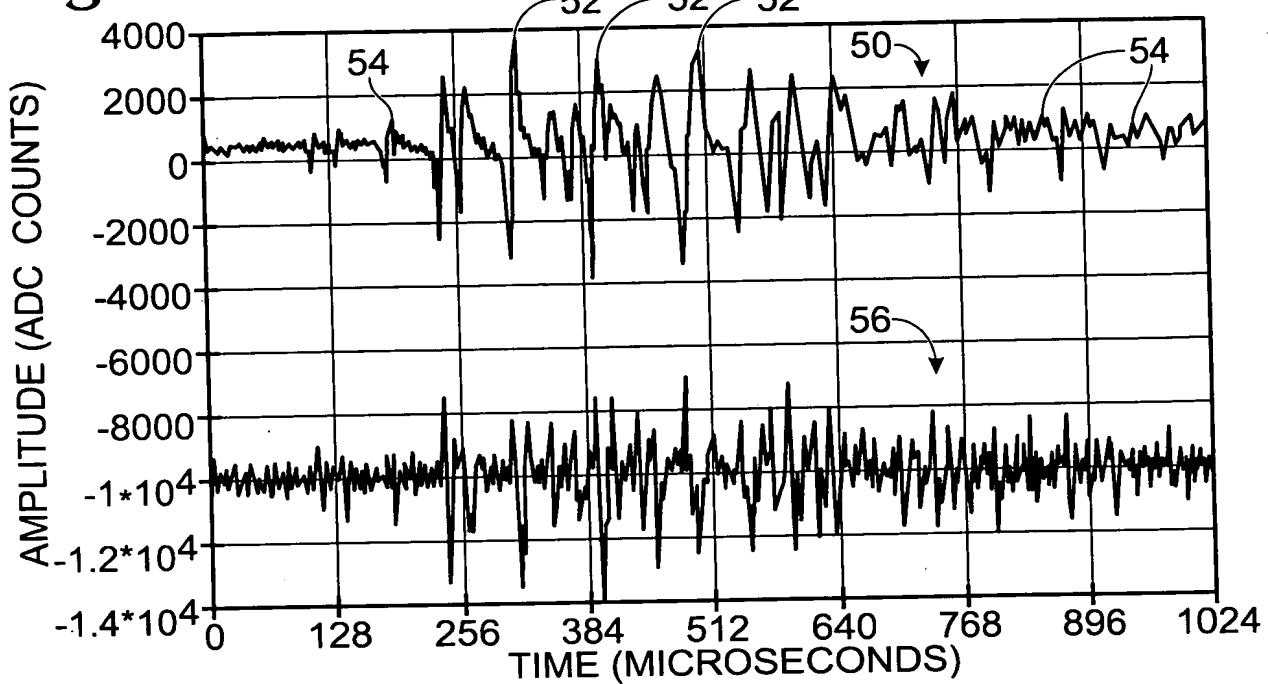


Fig. 4

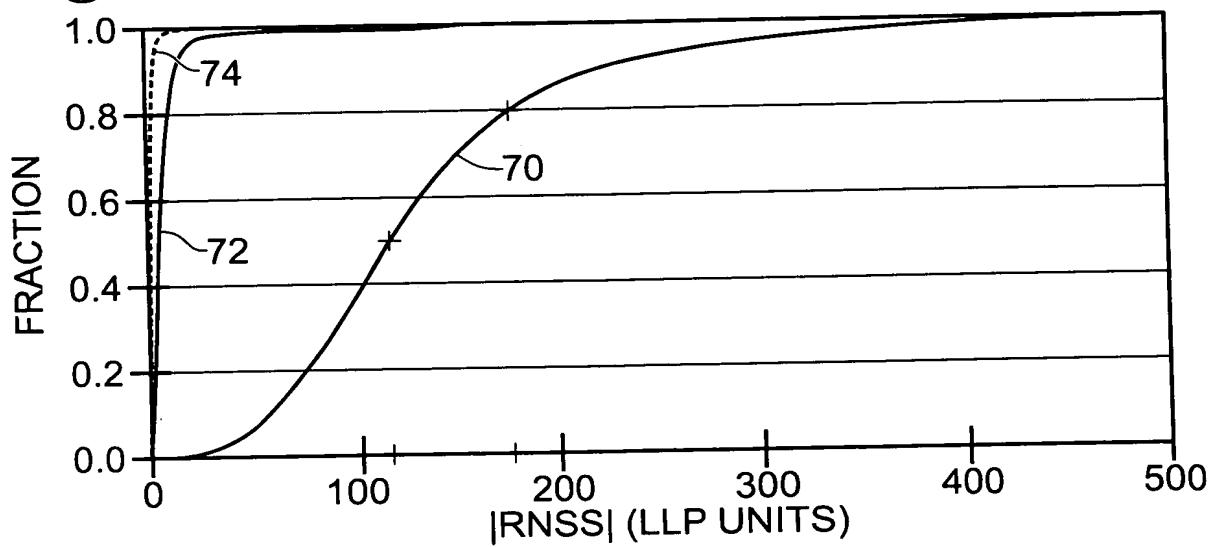




Fig. 5

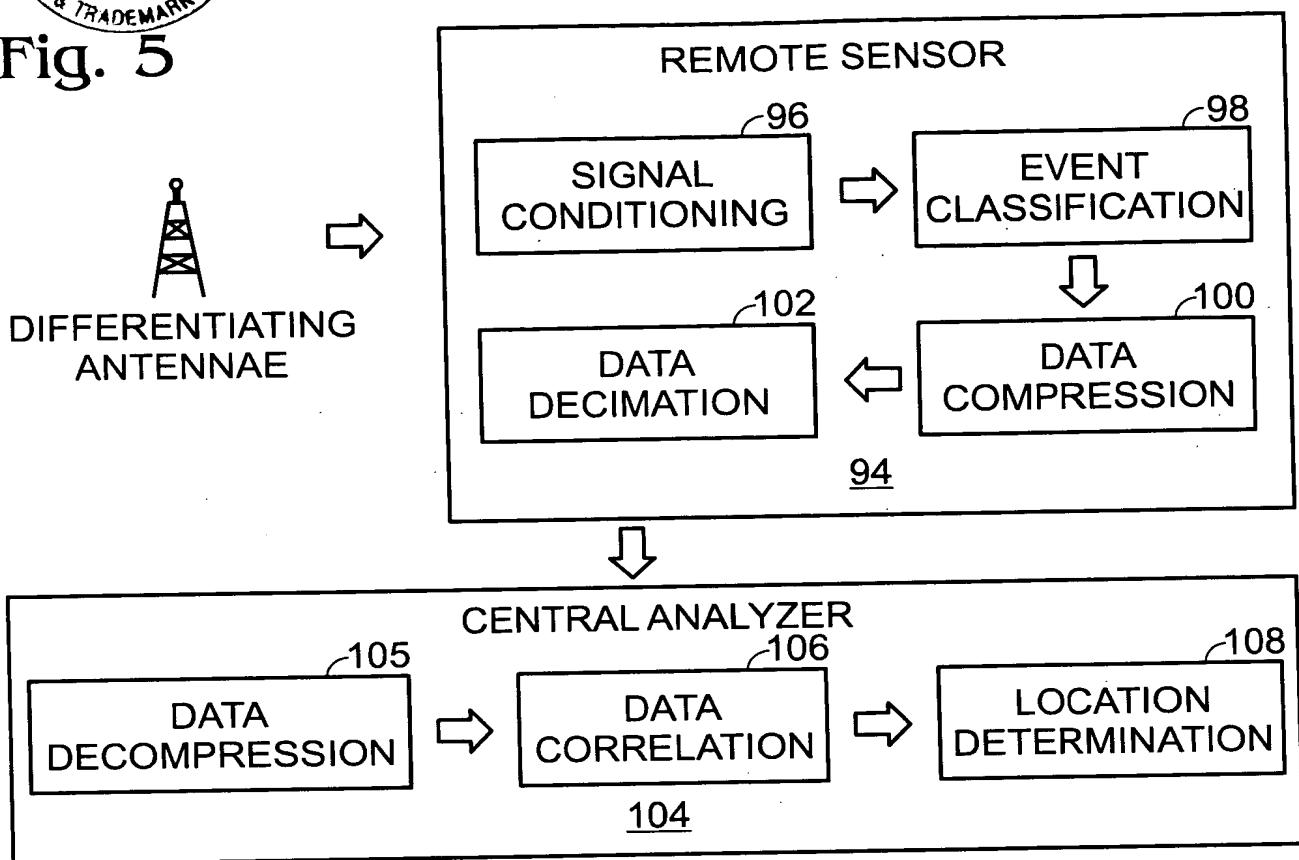
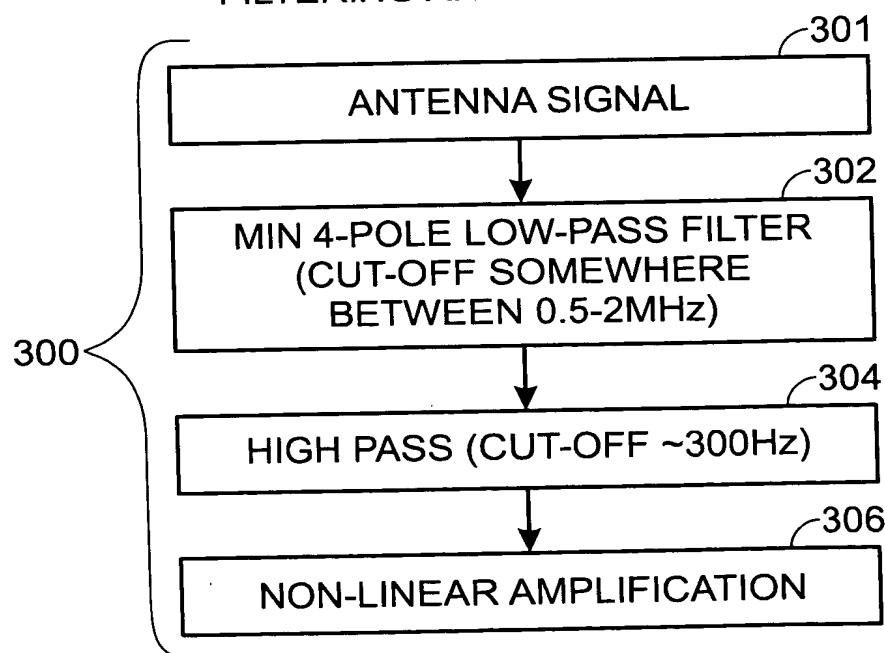


Fig. 7

MAJOR COMPONENTS OF
FILTERING AND AMPLIFICATION



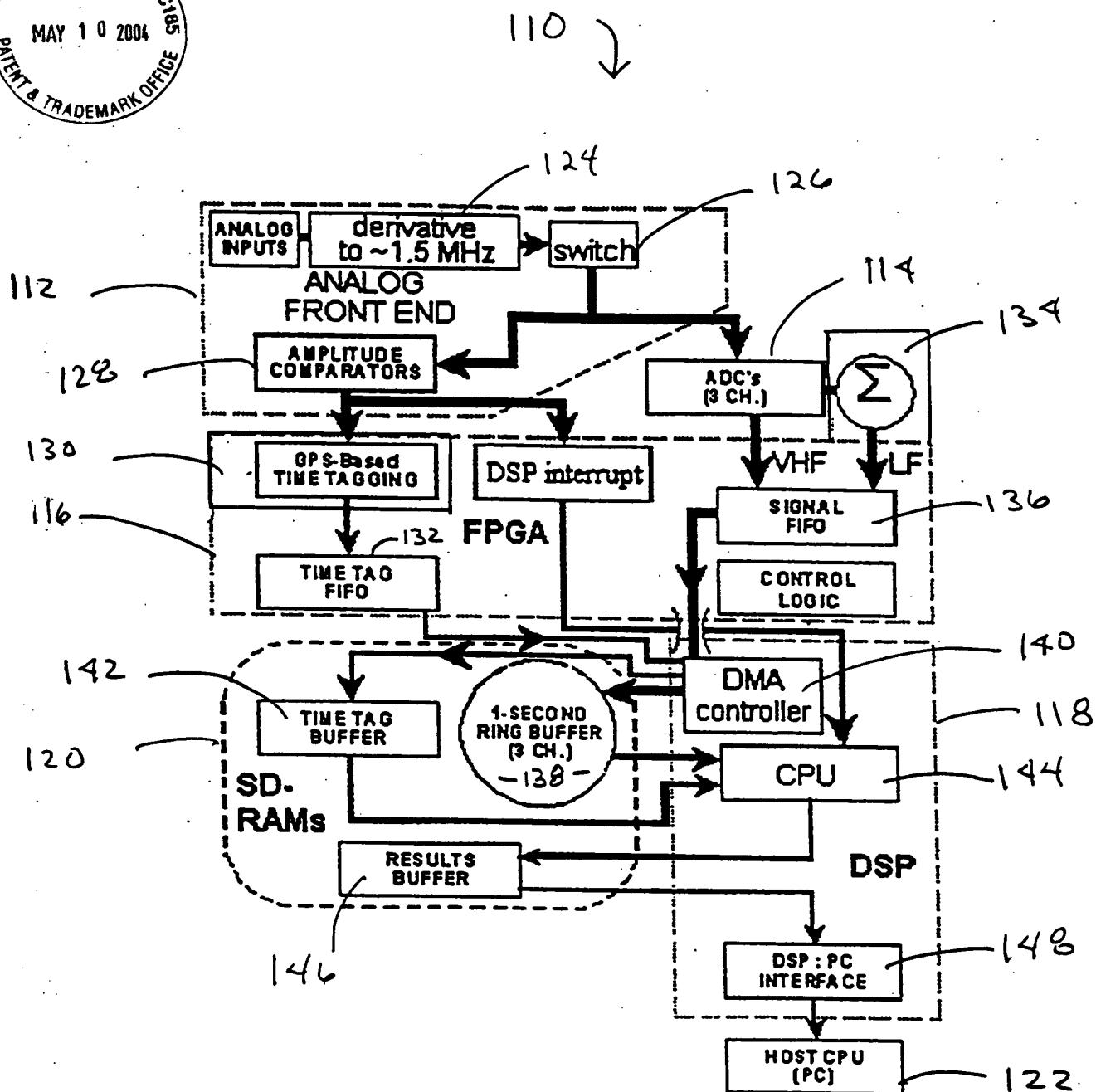


FIG. 6

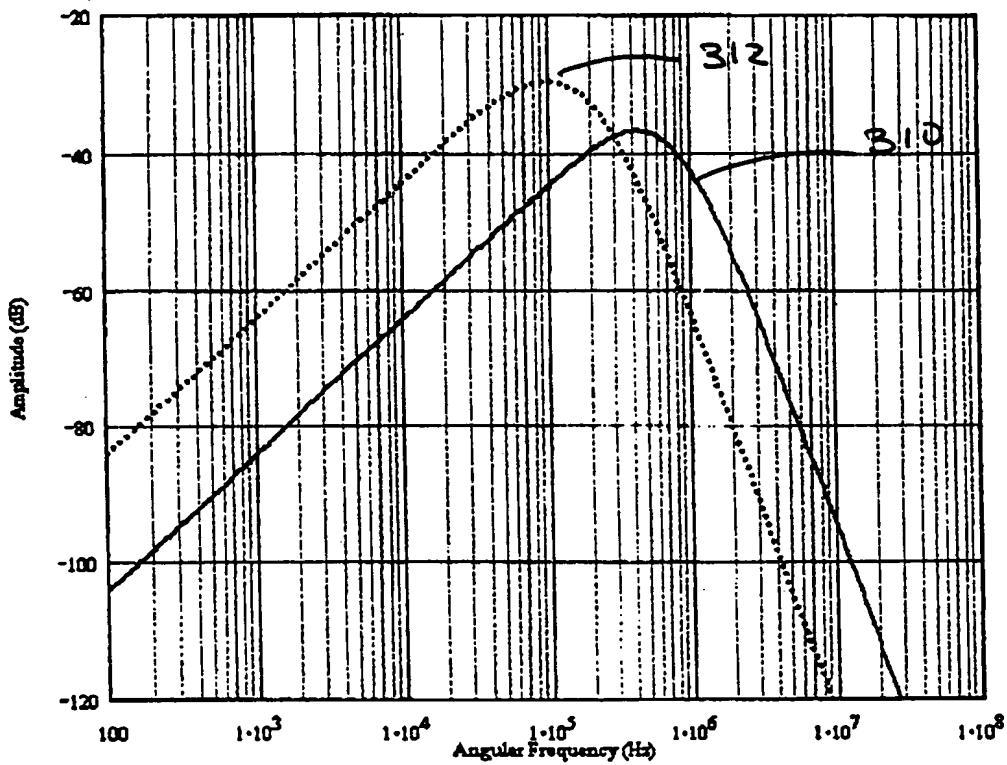


FIG. 8

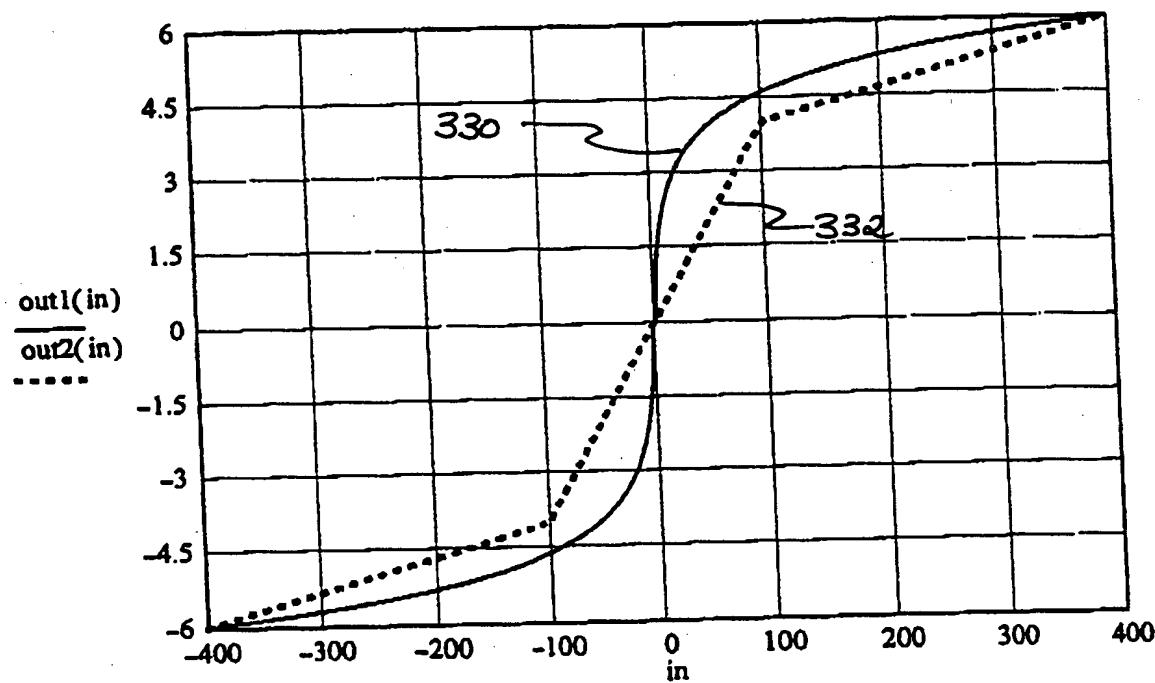


FIG. 9

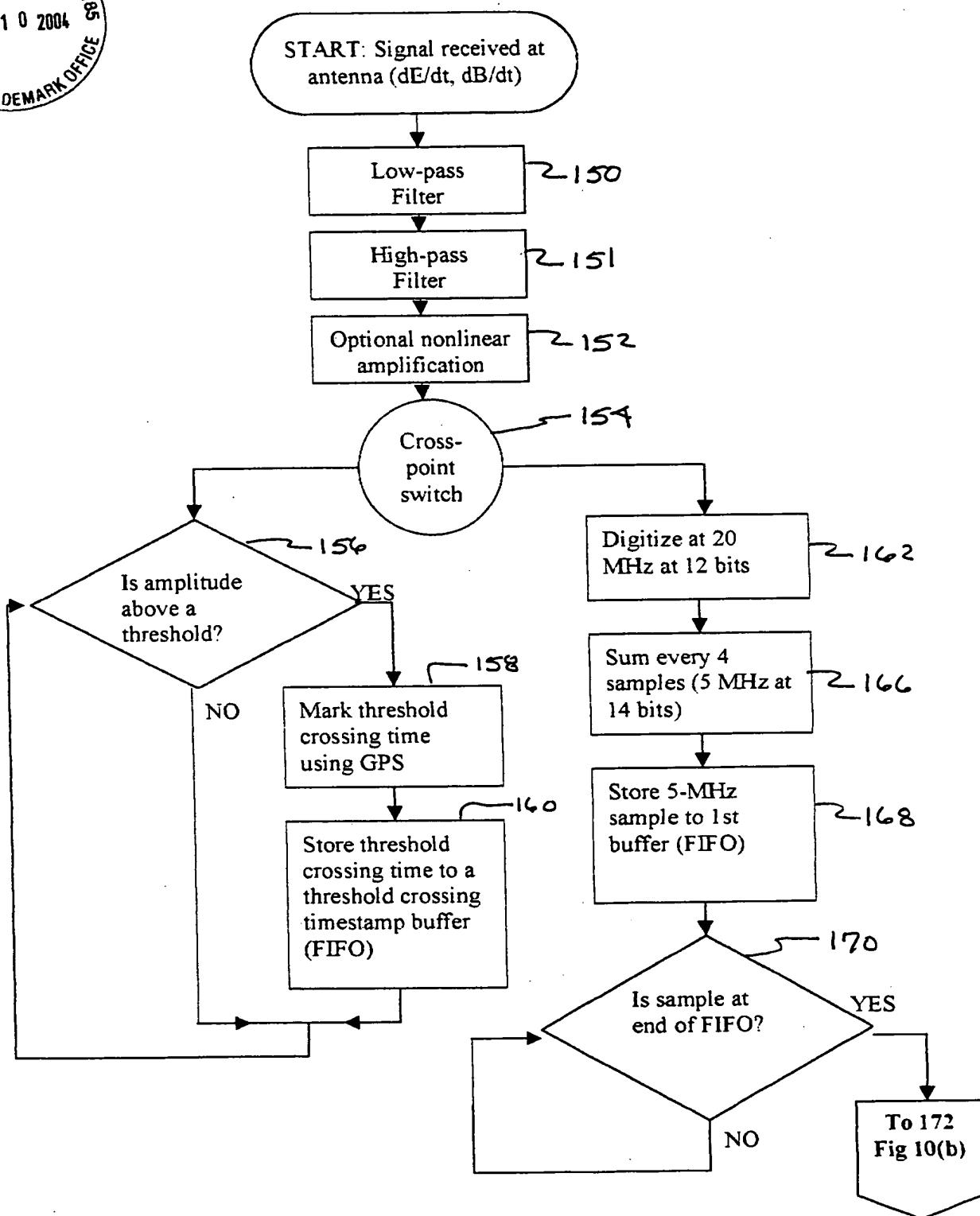


Fig. 10(a)

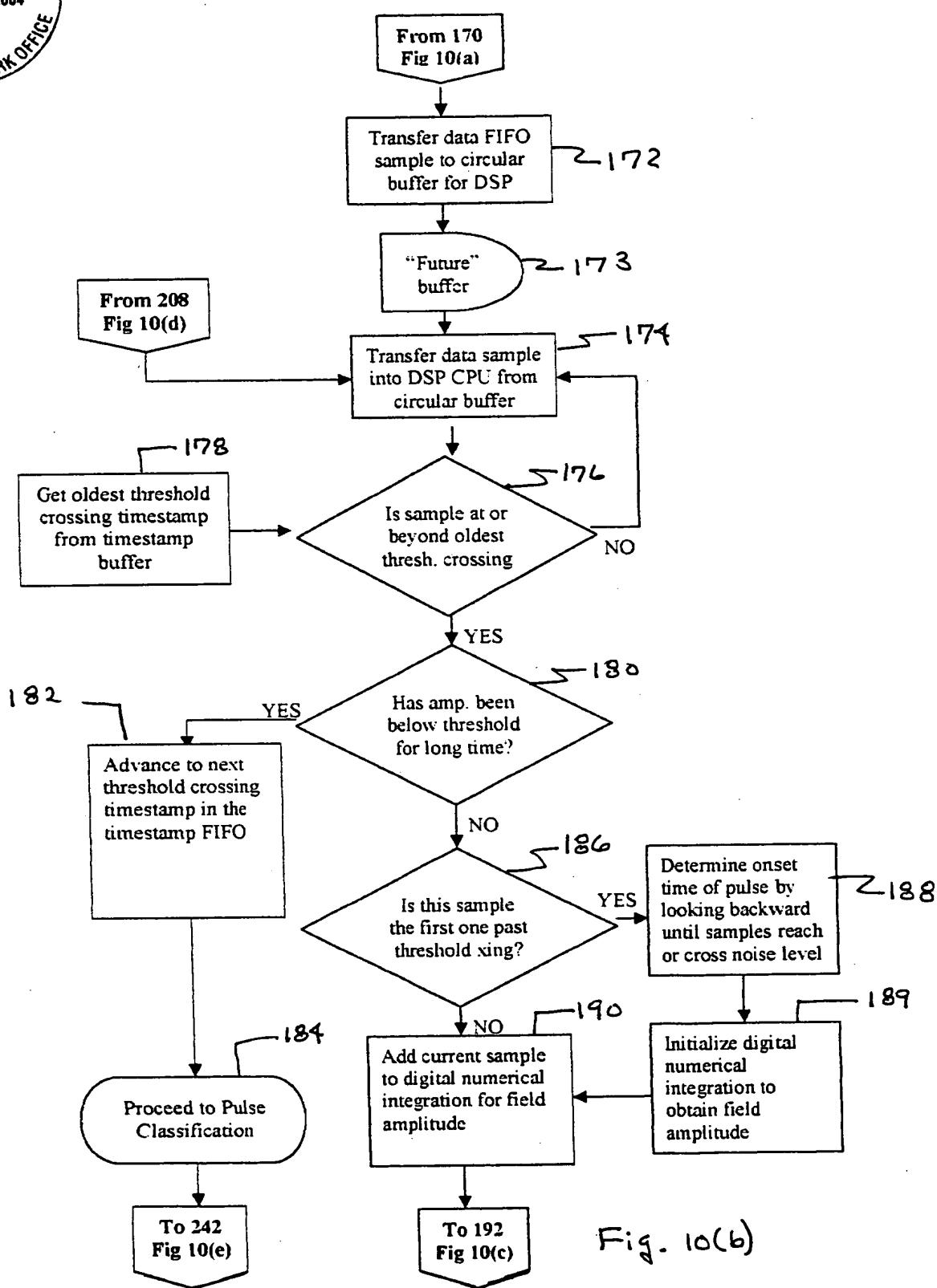


Fig. 10(b)

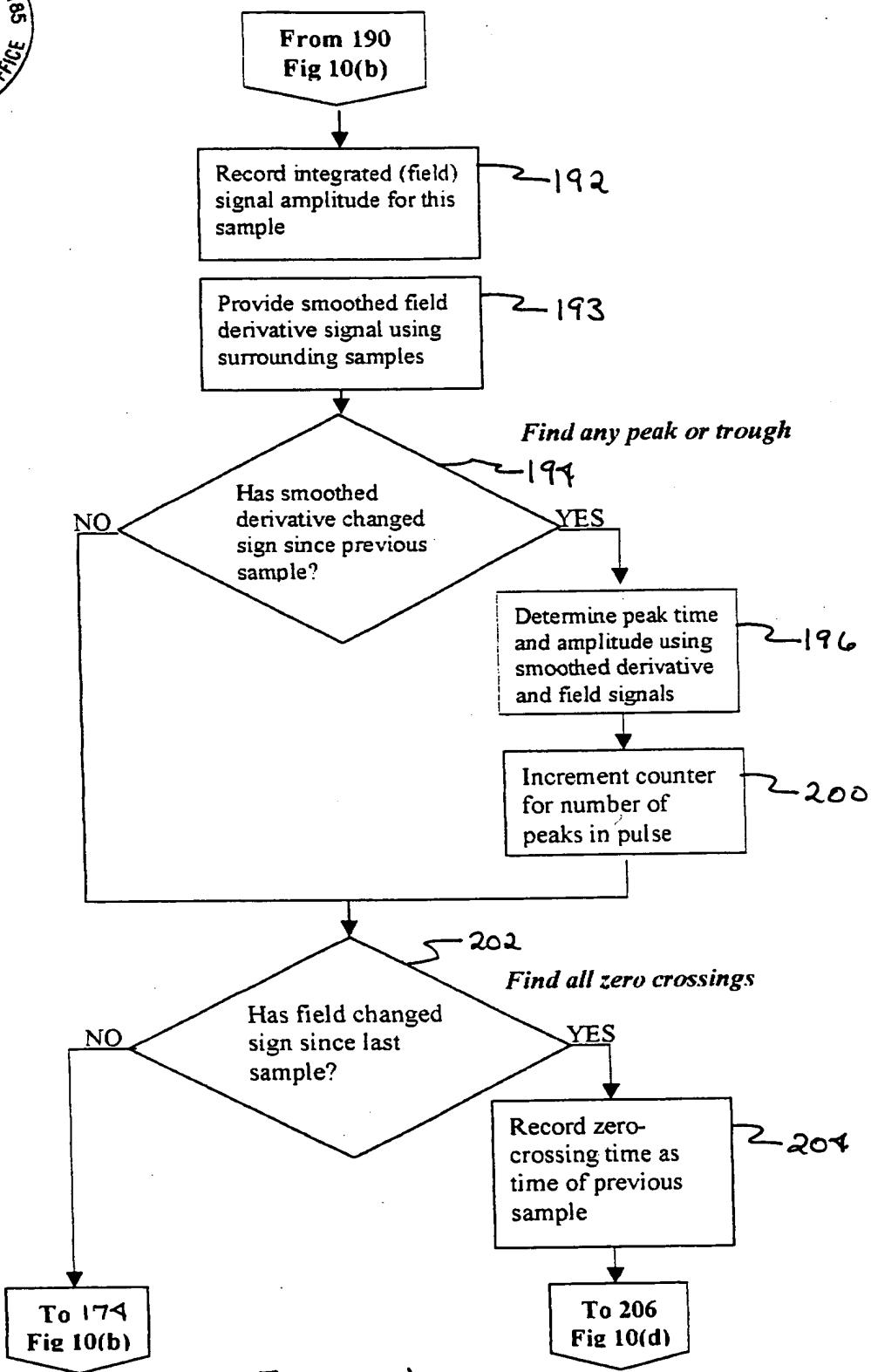


Fig. 10(c)

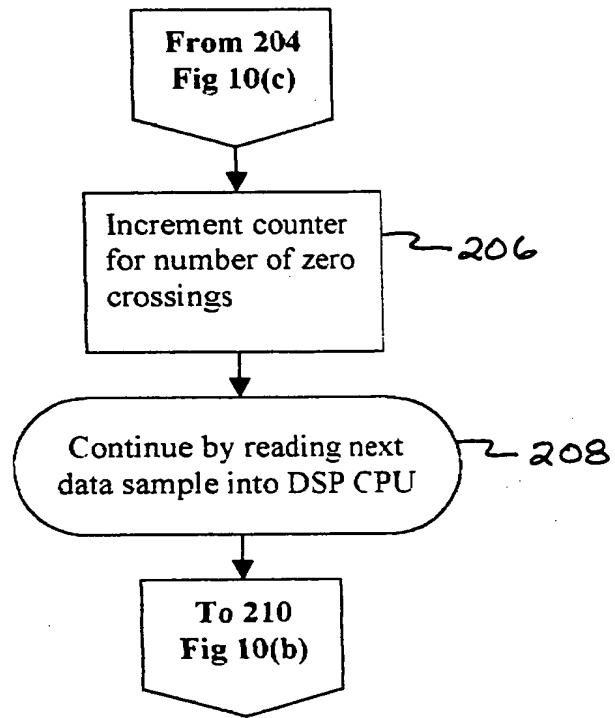
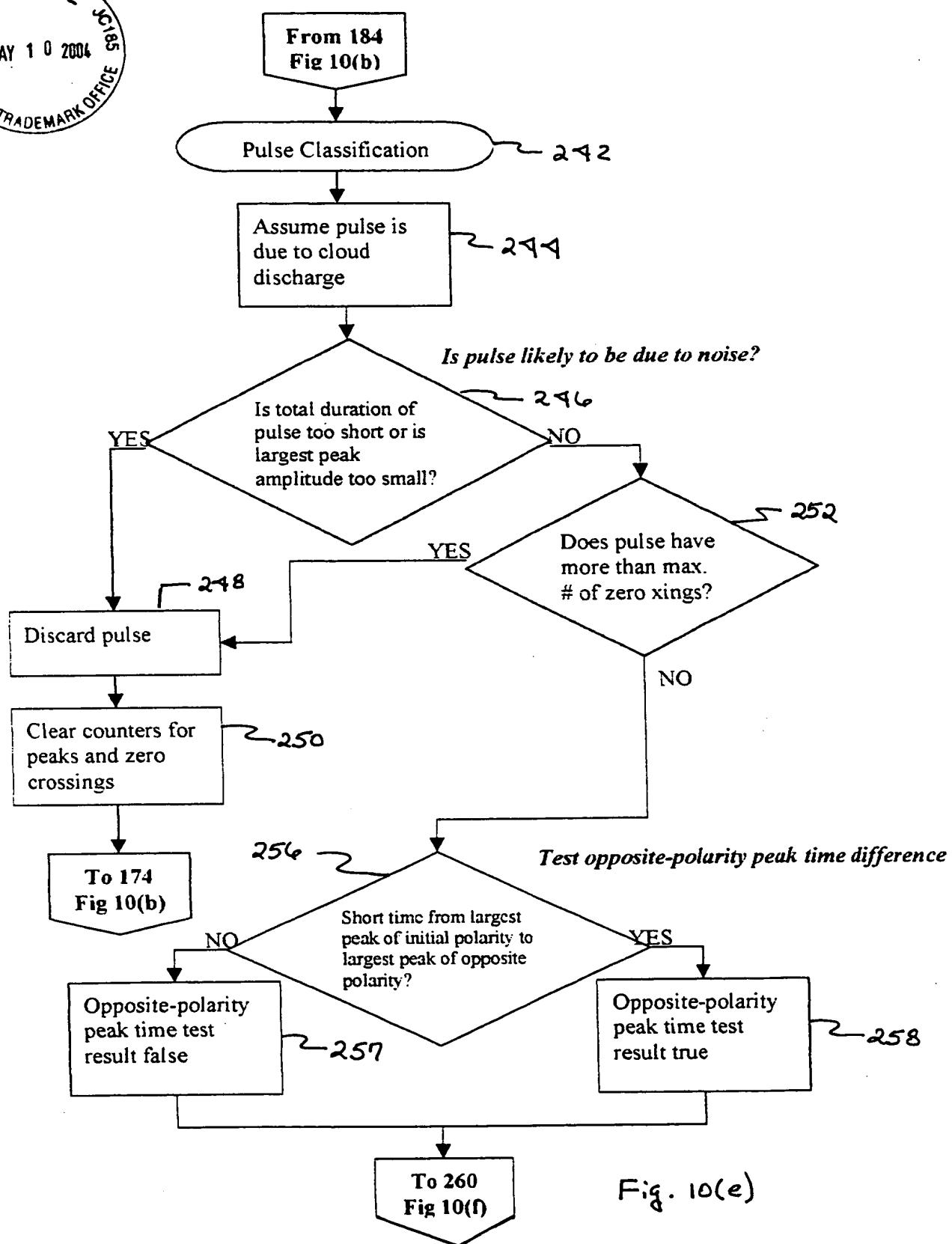


Fig. 10(d)



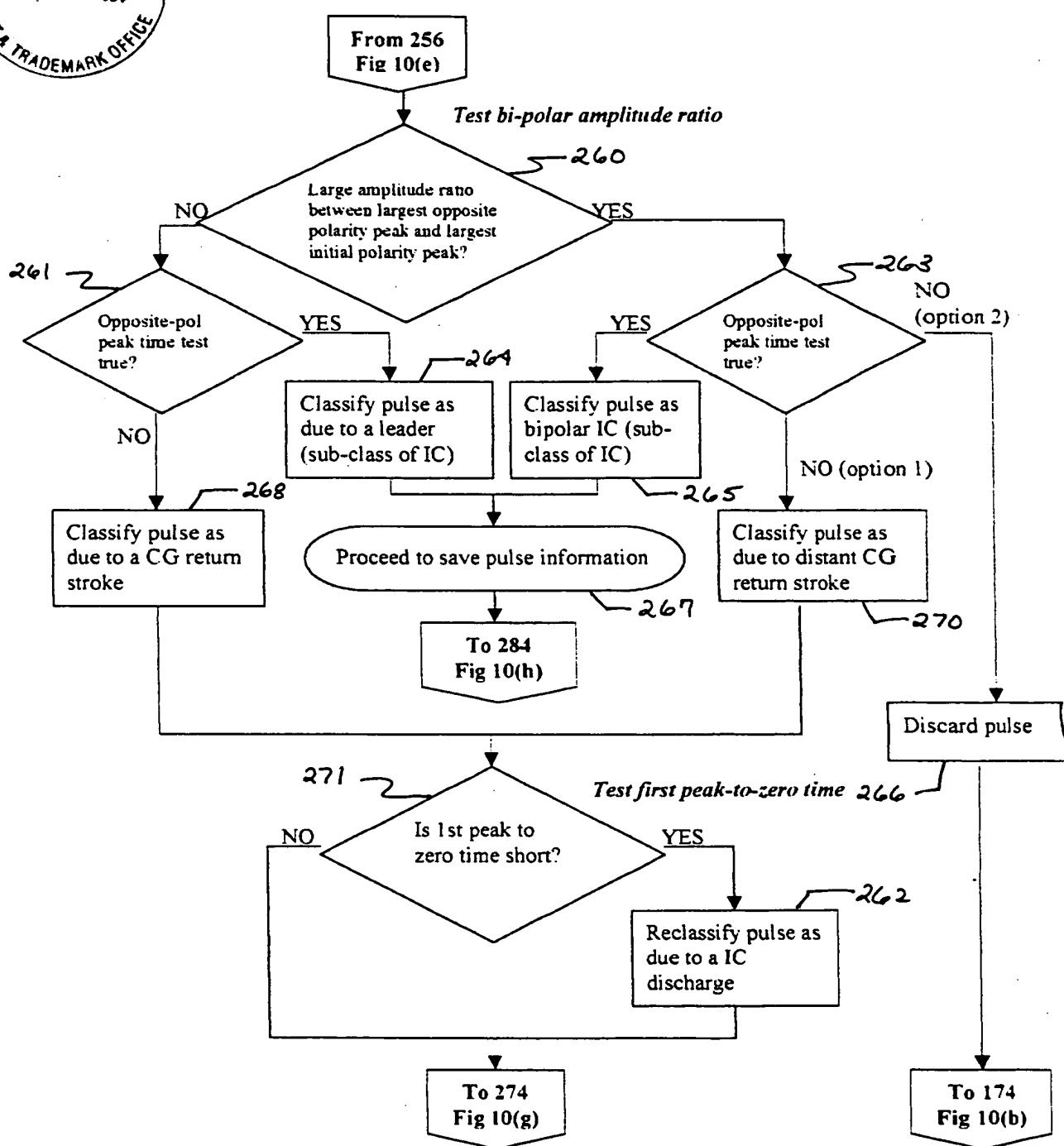


Fig. 10(f)

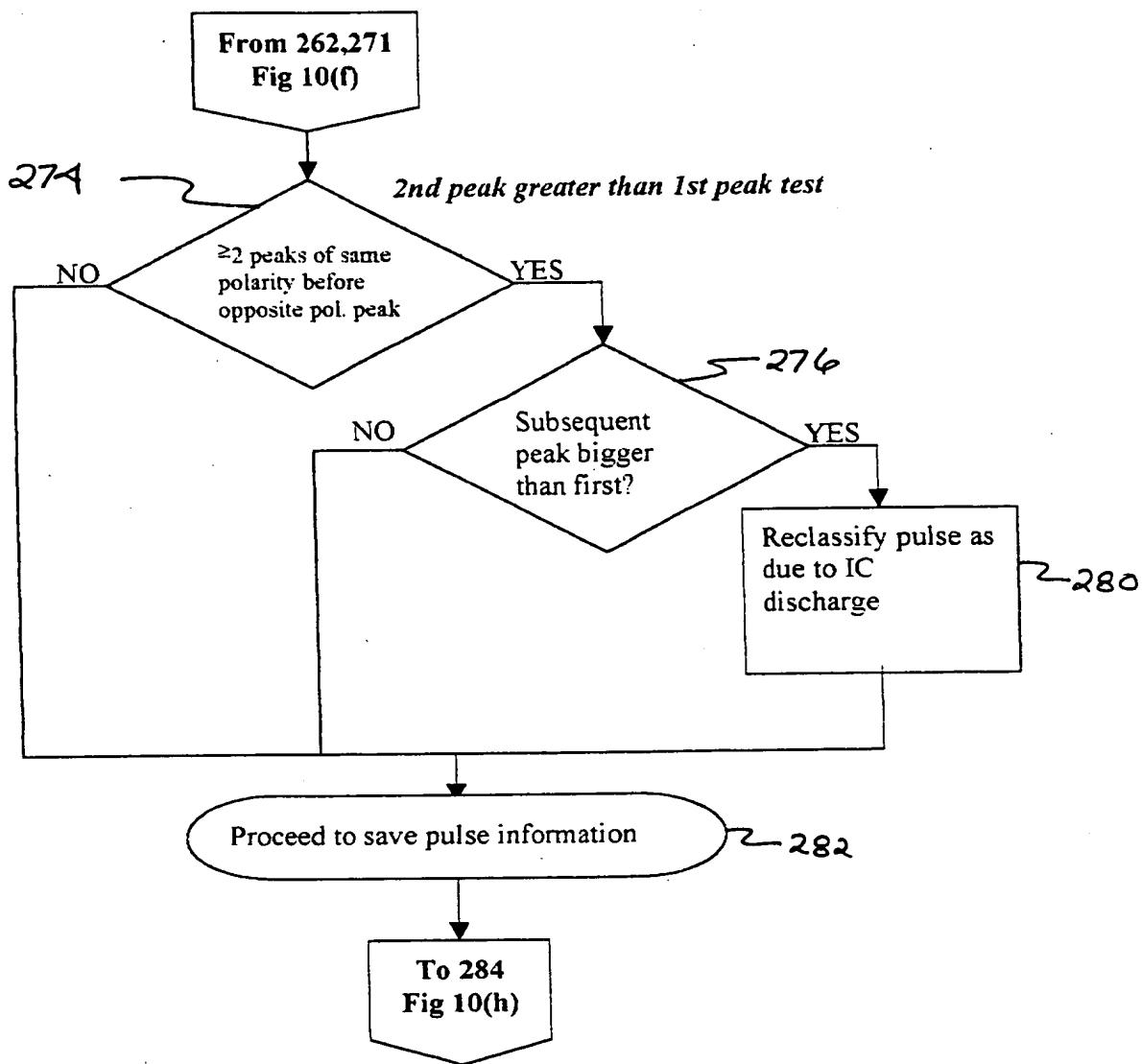


Fig. 10(g)

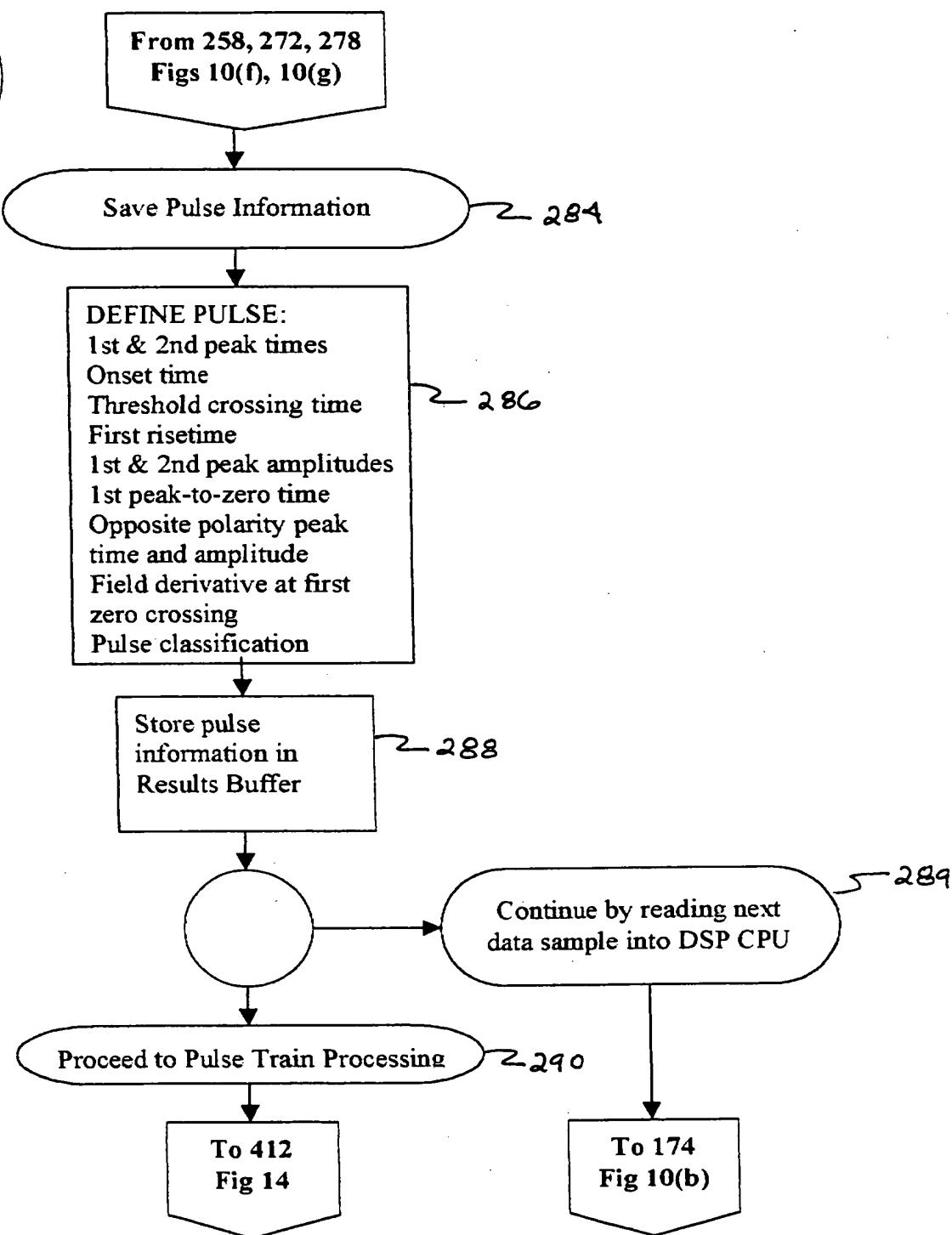


Fig. 10(h)

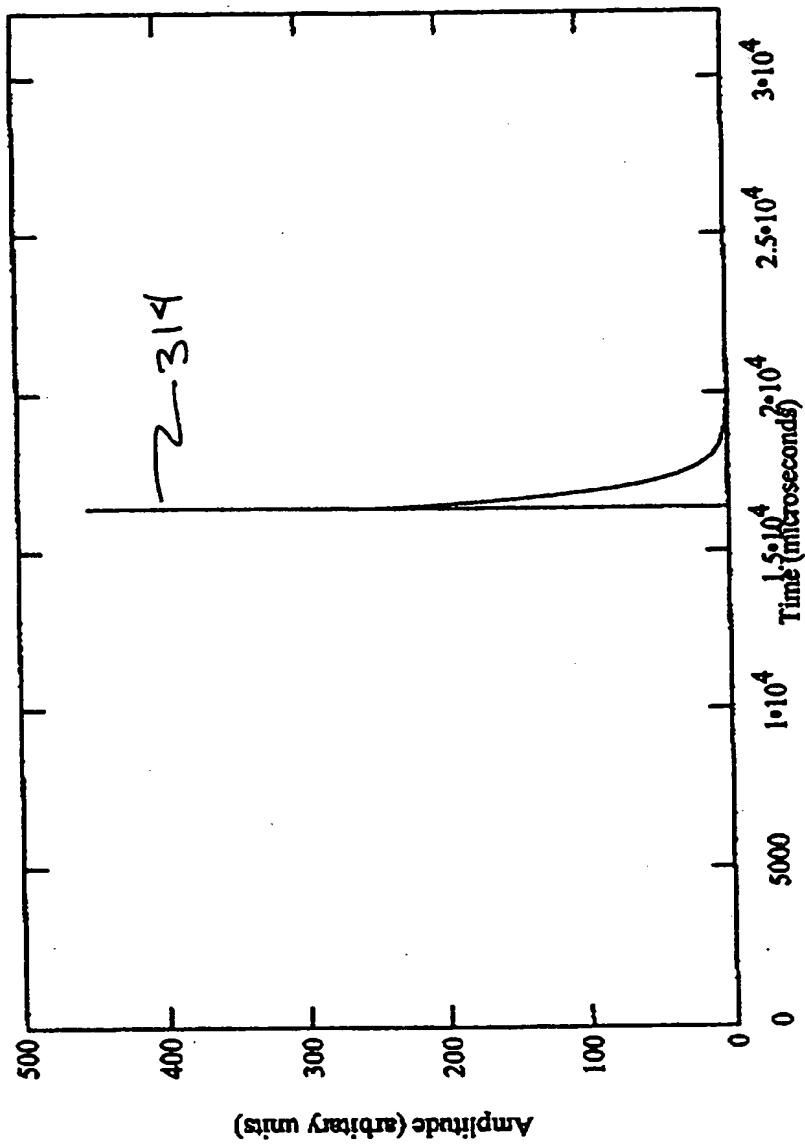


FIG. 11

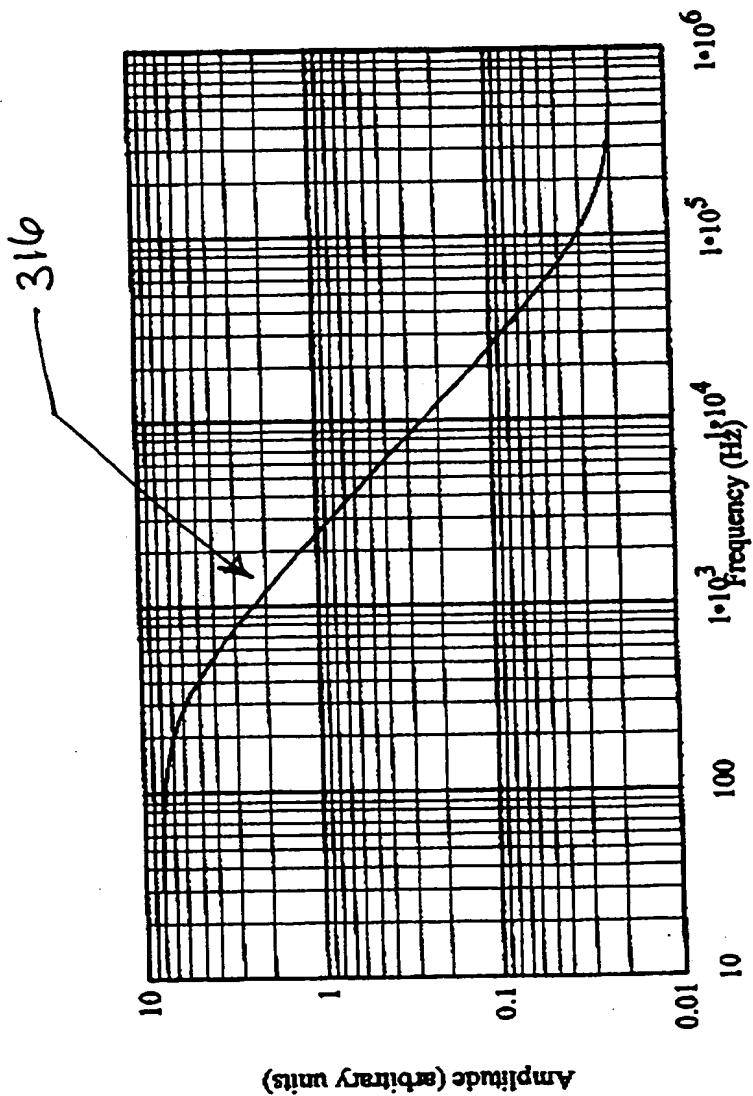


FIG. 12

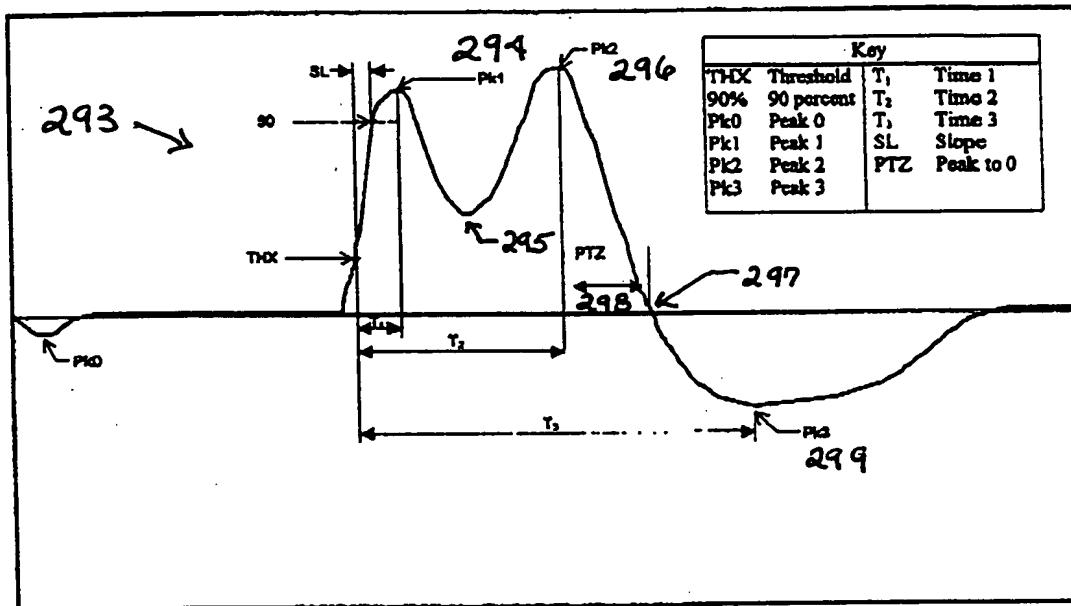


FIG. 13

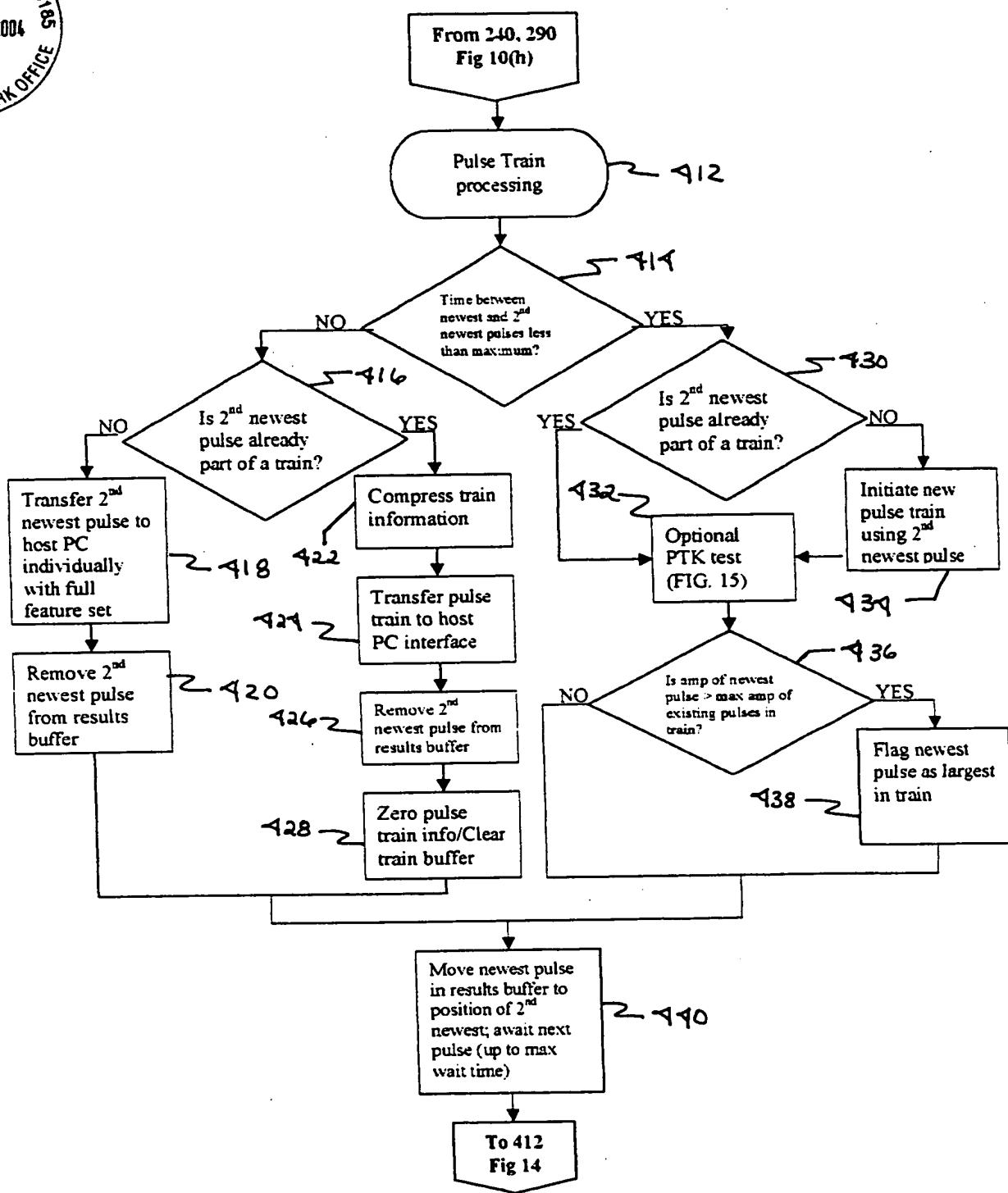


Fig. 14

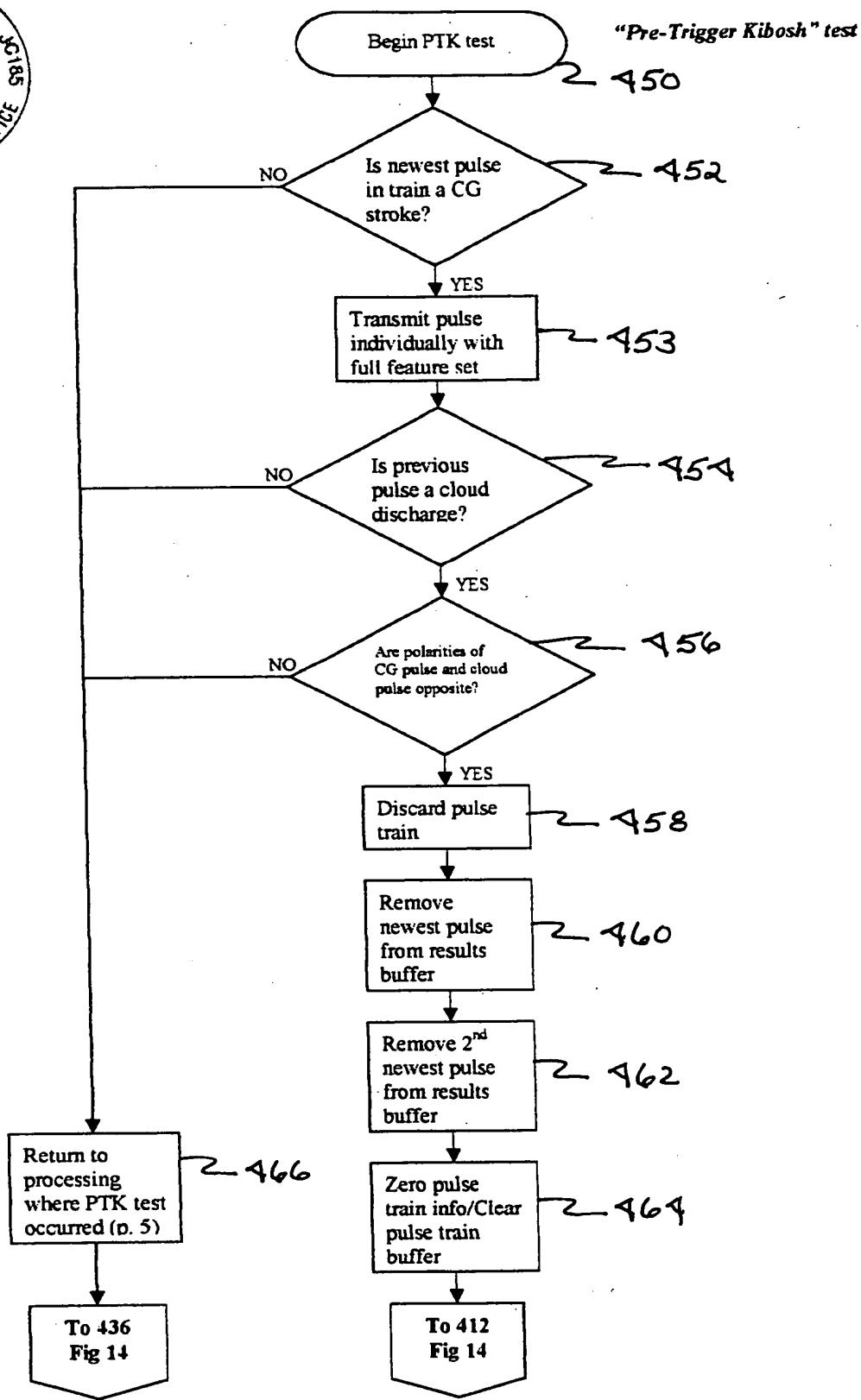


Fig. 15



Fig. 16

PULSE	TIME (FRAC. OF SEC.)	TIME (MICROSECONDS)	AMPLITUDE (COUNT)
471 ↗ 1	0.000500	500	4400
473 ↗ 2	0.000630	630	5100
3	0.000800	800	2900
4	0.000840	840	5000
5	0.000990	990	2900
6	0.001060	1060	2500

Fig. 17

COMPLETE REPRESENTATIONS		-	DECIMAL	HEXADECIMAL
PULSE1	TIME (TO SECOND):	997056000	3B6DDE00	
471 ↗	FRACTION OF SECOND:	10000 480	2710	
	AMPLITUDE:	4400	482	1130
	ANGLE:	359.99°	484	7FFF
	CLASSIFICATION:	CLOUD	486	1
			488	

Fig. 18

492 ↗
 HEX: 3 B 6 D D E 0 0 0 | 490
 BIN: 0011 1011 0110 1101 1101 1110 0000 0000 |
 COMMENT: ← TIME TO THE SECOND →

492 ↗
 HEX: 0 0 8 9 C 5 3 | 490
 BIN: 0000 0000 0001 1000 1001 1100 0101 0011 |
 COMMENT: ← FRACTION OF SECOND → ← AMPLITUDE →
 FLAG TO INDICATE THAT
 AMPLITUDES ARE INCLUDED

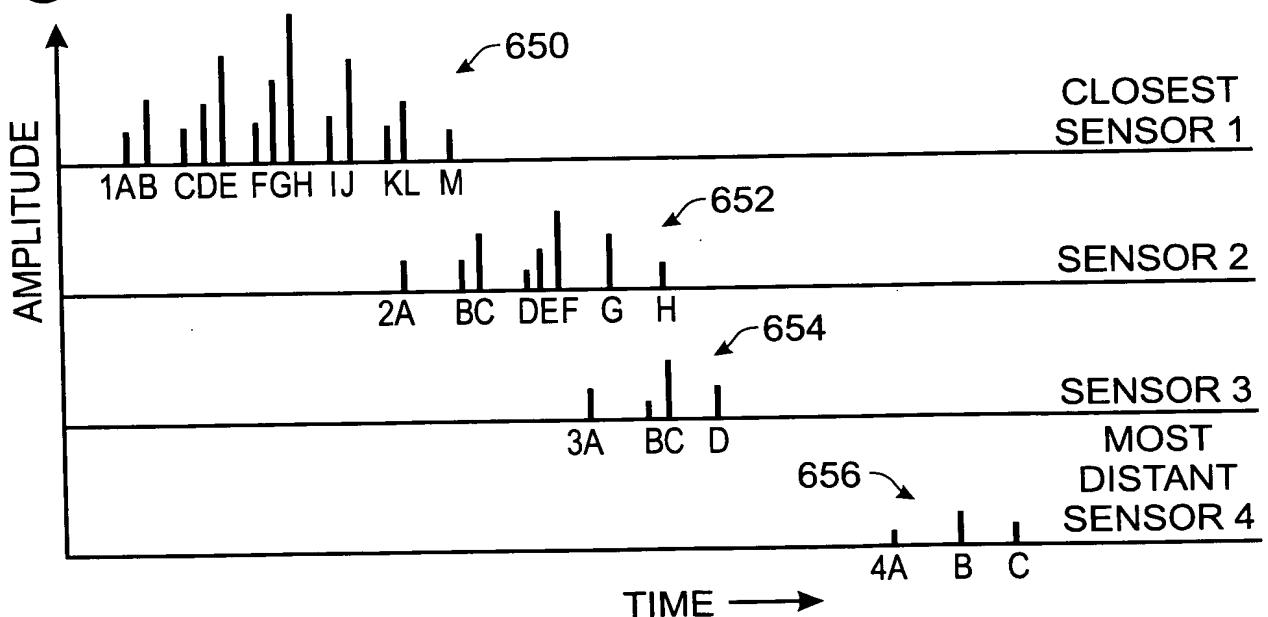
492 ↗
 HEX: E C F F F F | 490
 BIN: 0011 1100 1111 1111 1111 1111 |
 COMMENT: AMPLITUDE ← ANGLE → CLASSIFICATION
 (1=CLOUD;
 0=CG)

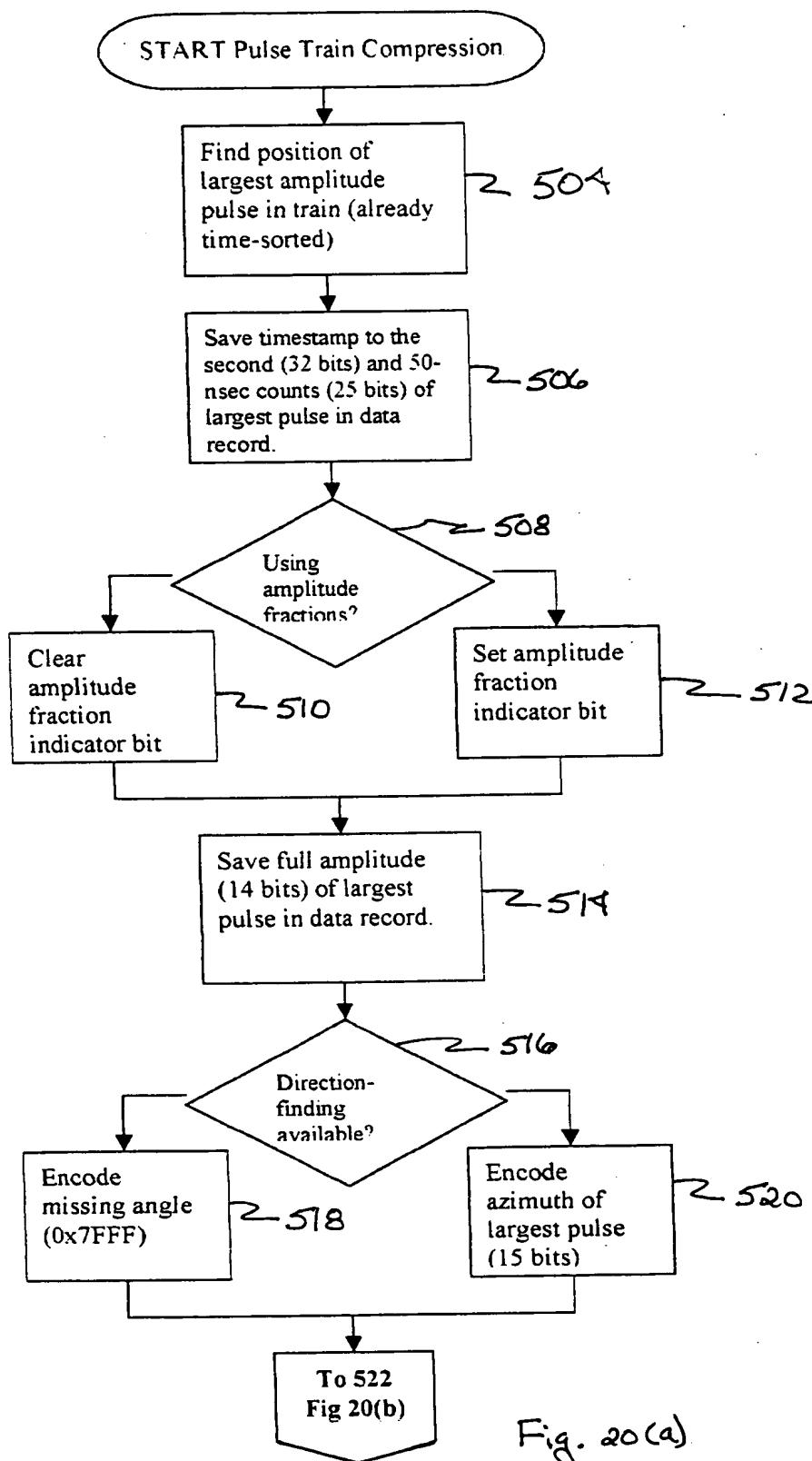
Fig. 19

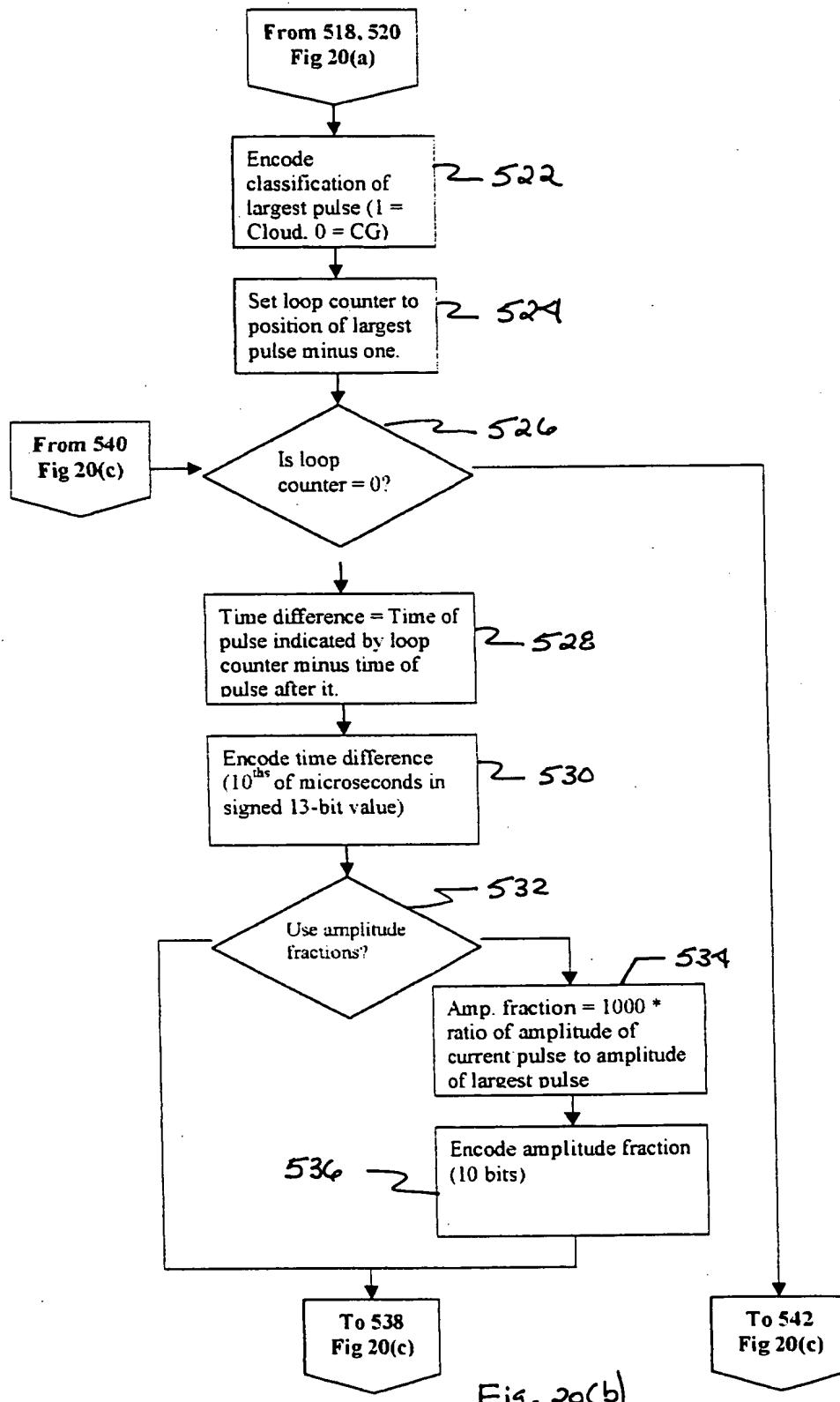
O I P E
 MAY 10 2004
 PATENT & TRADEMARK OFFICE
 U.S.A.

502 HEX: D 7 6 7 5 E 500 BIN: 0011 0111 0110 0111 0101 1110	PULSE 1
502 HEX: 3 5 2 6 3 8 500 BIN: 0011 1101 0010 0110 0011 1000	PULSE 3
502 HEX: 0 C 8 7 D 4 500 BIN: 0000 1100 1000 0111 1101 0100	PULSE 4
502 HEX: 2 E E 6 3 8 500 BIN: 0010 1110 1110 0110 0011 1000	PULSE 5
502 HEX: 1 5 E 5 E A 500 BIN: 0001 0101 1110 0101 1110 1010	PULSE 6
TIME DIFFERENCES AMPLITUDE FRACTIONS 13 BITS	
CLASSIFICATION	

Fig. 22







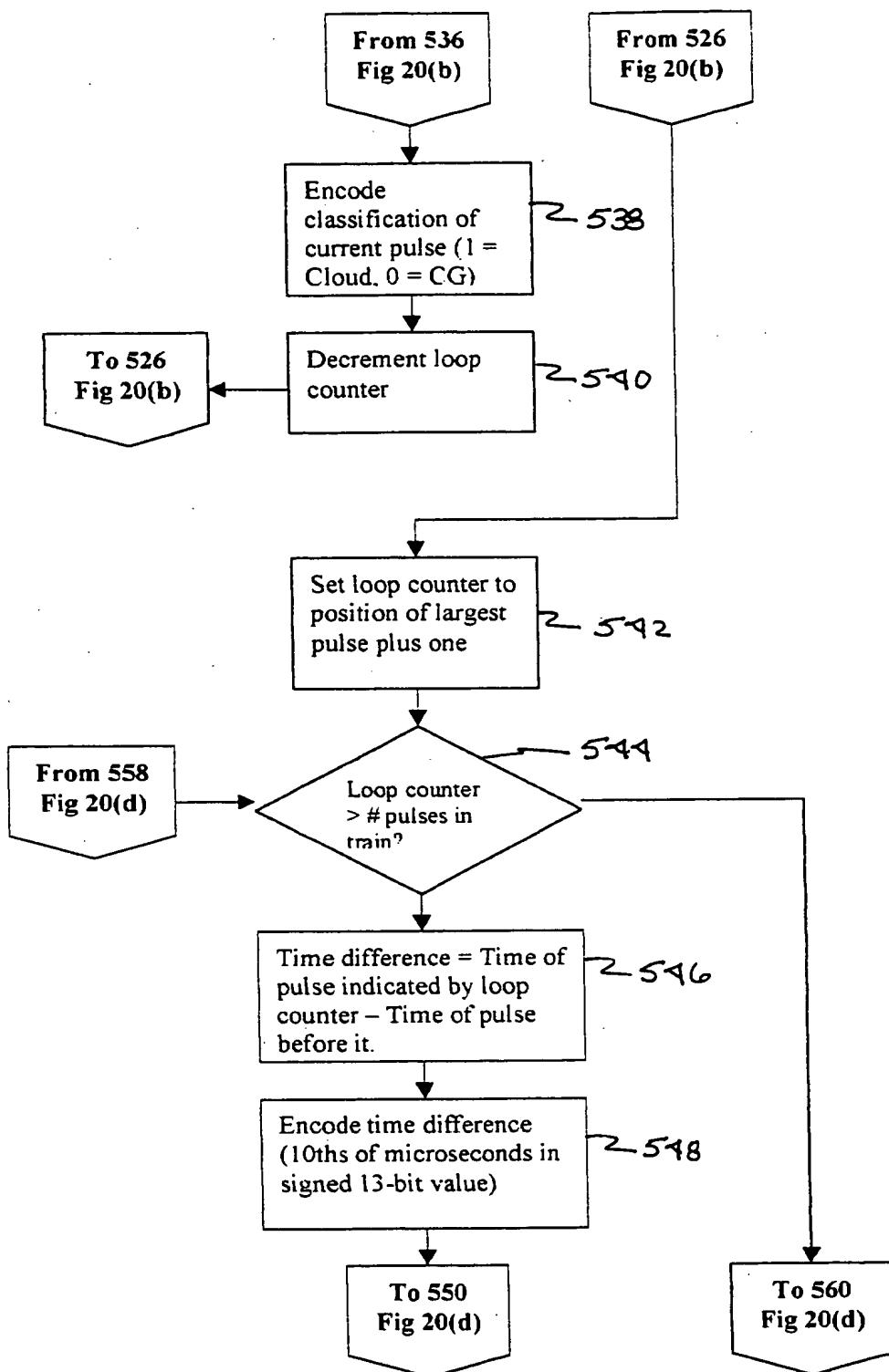


Fig. 20(c)

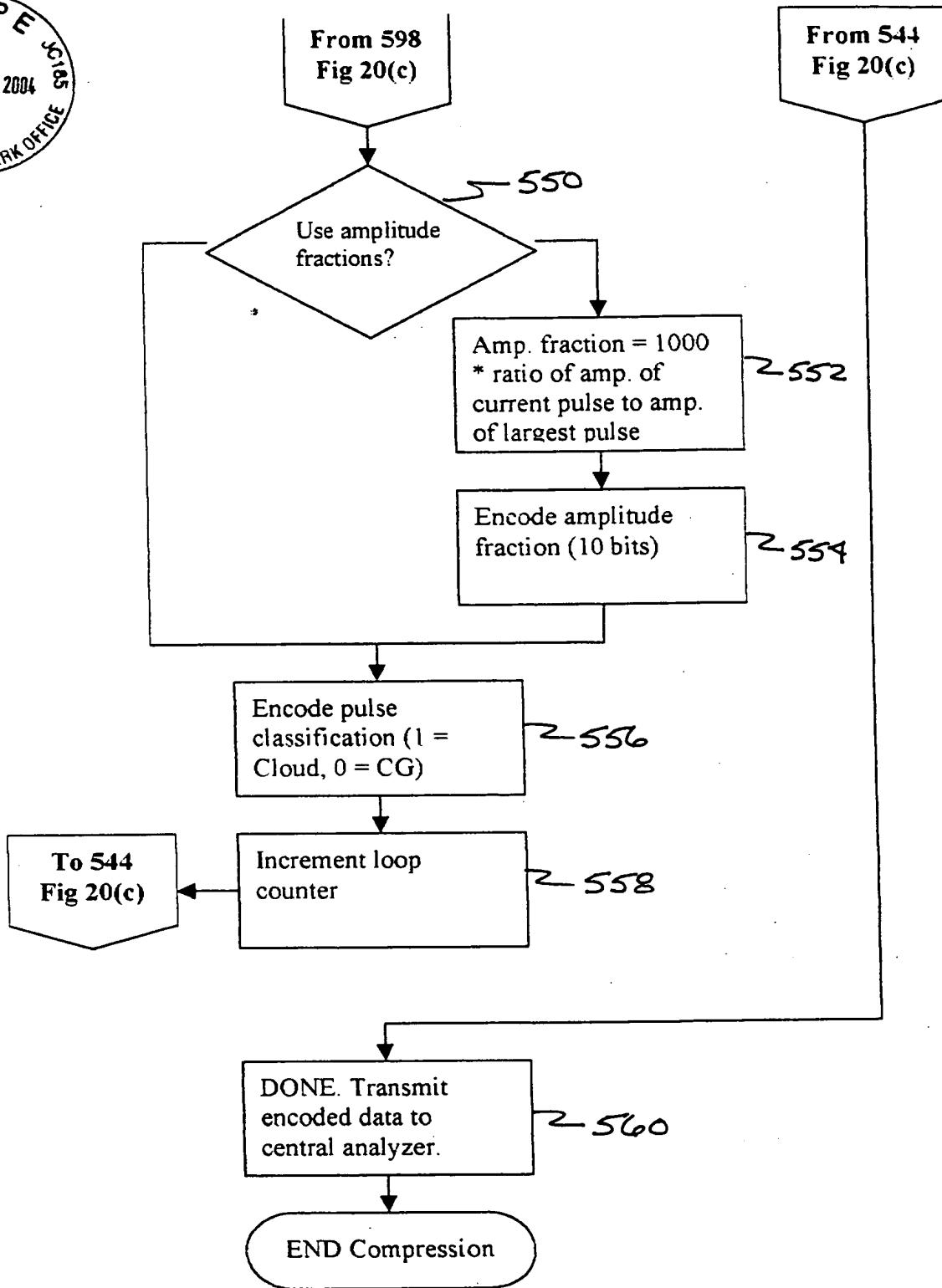
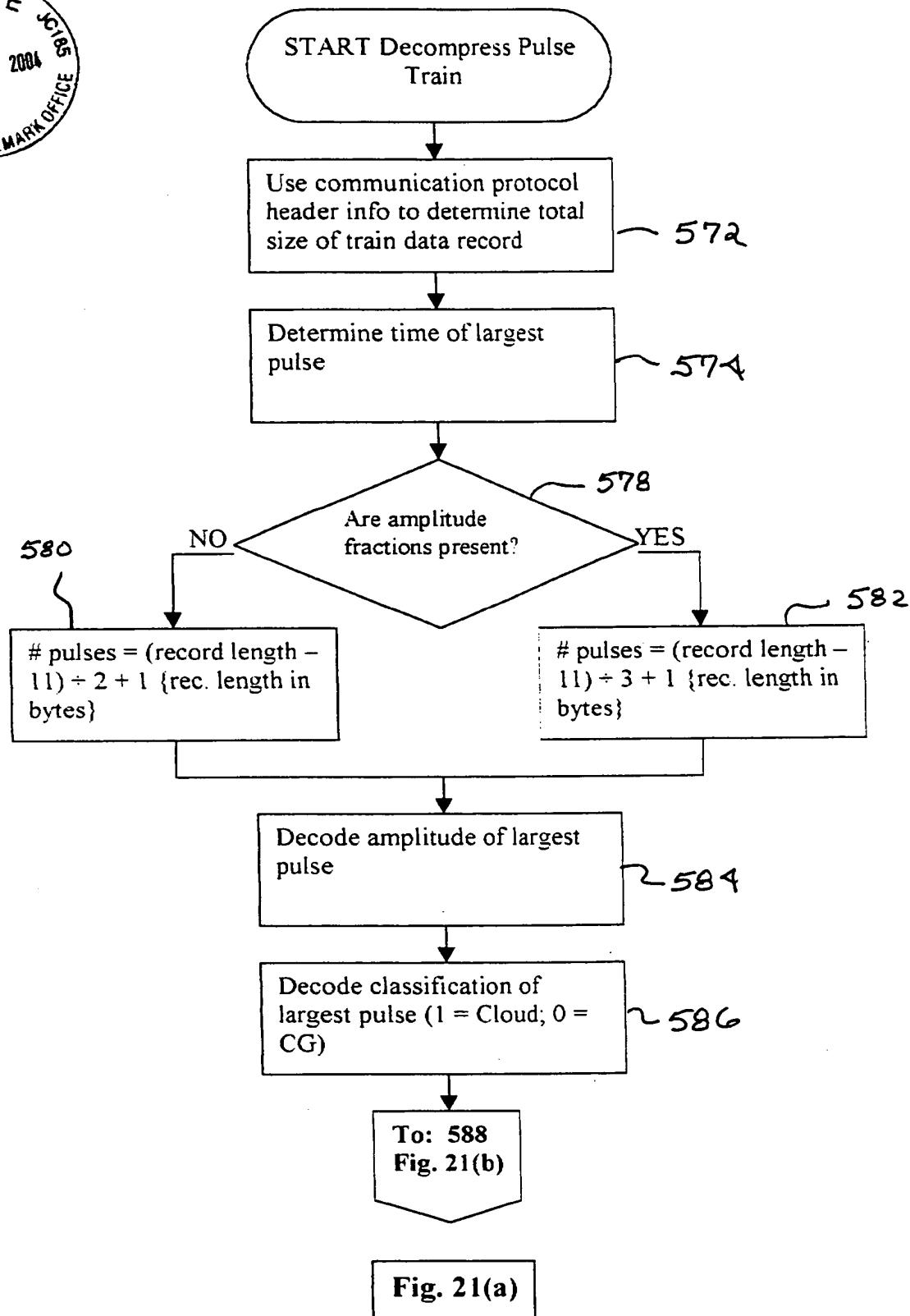
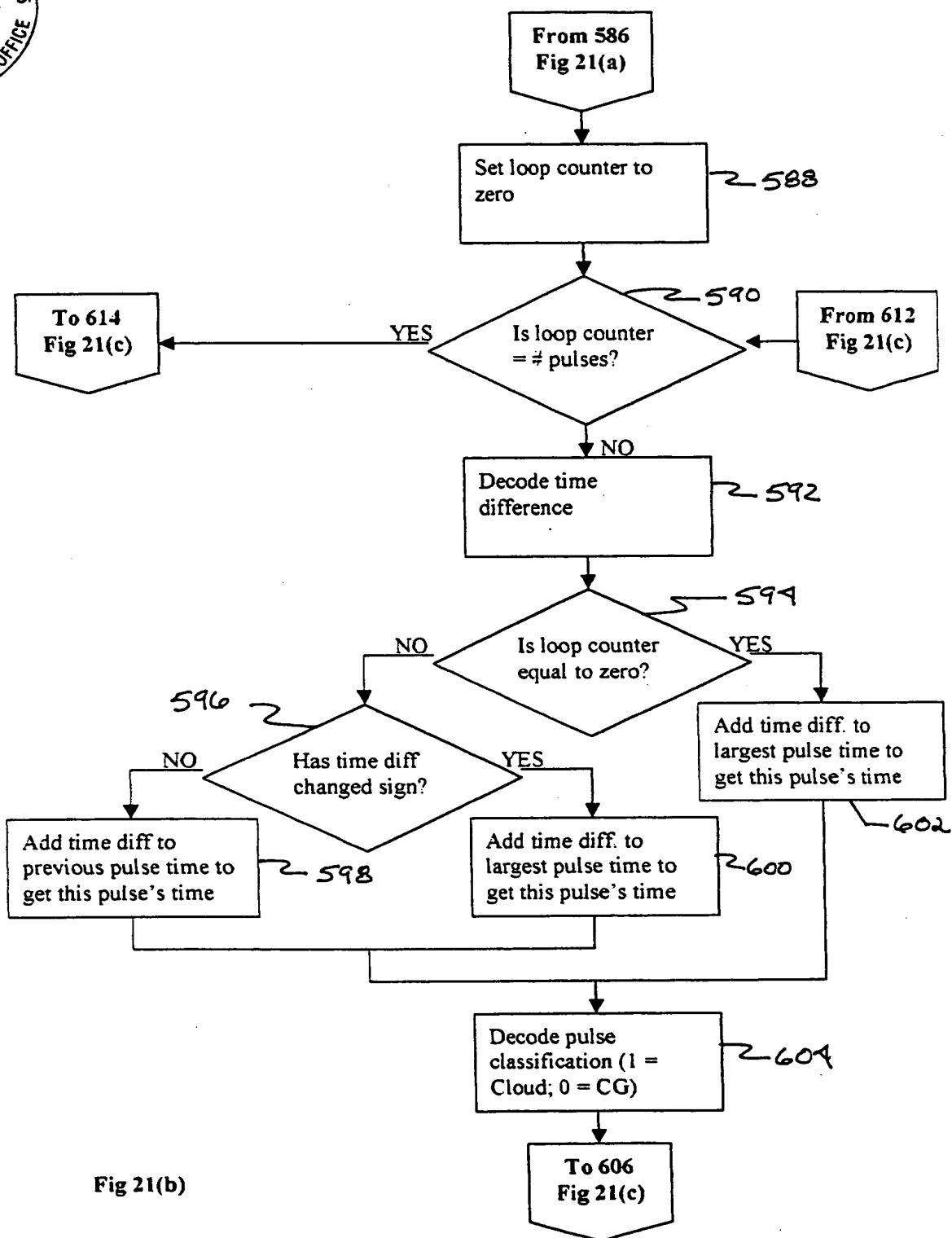


Fig. 20(d)





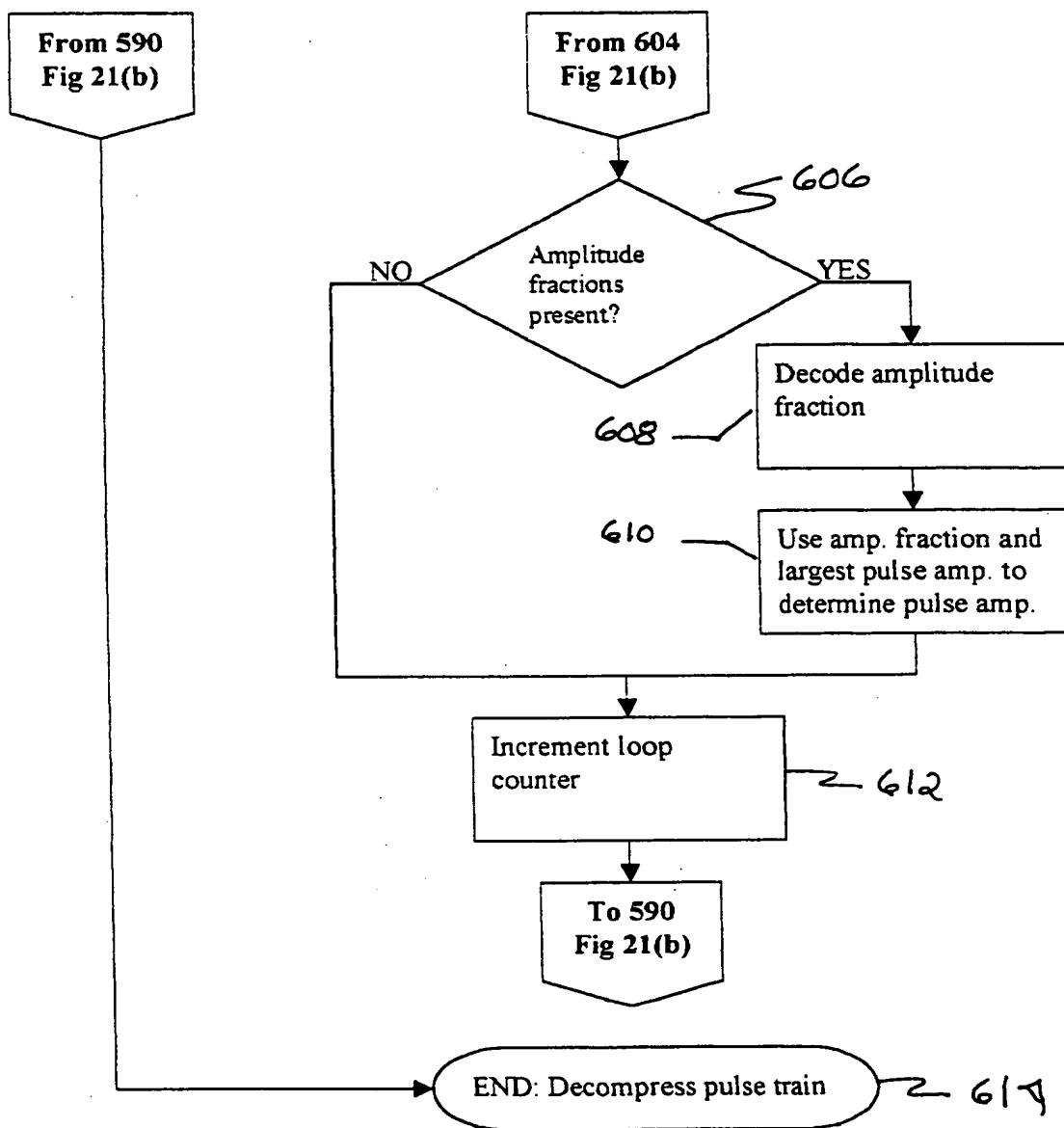


Fig 21(c)



Fig. 23

DECREASING MAGNITUDE	SENSOR1	SENSOR2	SENSOR3	SENSOR4
	1H	2F	3C	4B
	1J	2C	3D	4C
	1E	2C	3A	4A
	1G	2E	3B	
	1B	2A		
	1L	2H		
	1D	2B		
	1F	2D		
	1A			
	1C			
	1I			
	1K			
	1M			

Fig. 24

